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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,639	08/17/2001	Neal G. Skinner	2000IP000227	6326

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EXAMINER

SEDIGHIAN, REZA

ART UNIT	PAPER NUMBER
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2633

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DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

KS

Office Action Summary

Application No.

09/932,639

Applicant(s)

SKINNER NEAL G.

Examiner

M. R. Sedighian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-13, 19, 20, 25, 27, 28, 30, 39, 40 and 44-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-13, 27 and 28 is/are allowed.
- 6) ☒ Claim(s) 19, 20, 25, 30, 39, 40, 44, 45, 47-49 and 52-58 is/are rejected.
- 7) ☒ Claim(s) 46, 50, 51 and 59-61 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

1. In view of the appeal brief filed on 9/12/03, PROSECUTION IS HEREBY REOPENED.

A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 56 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 56, it is not clear about "... electrical power is supplied to the selected well tools in a manner which transmits data in a selected one of digital and analog form". Claim 44 which claim 56 depends on, recites a control system to selectively supply power to multiple electrical power consuming well tools, and does not recite transmission of data.

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4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 25 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Endo et al. (US patent No: 4,495,421).

Regarding claims 25 and 30, Endo teaches an electrical power distribution system (fig. 4), comprising: a fiber optic line (40, fig. 4); multiple power consuming devices (2-1, 2-2, 2-3, fig. 4); multiple control modules (30-1, 30-2, 30-, fig. 4) interconnected between the fiber optic line (40, fig. 4) and the power consuming devices (2-1, 2-2, 2-3, fig. 4) and each of the control modules being operative to select the respective power consuming device for supplying electrical power thereto (for example switch 30-1 is connected to electrical device 2-1 to turn the device on and off) in response to one of multiple optical wavelength bands transmitted through the fiber optic line (for example switch 30-1 receives wavelength λ_1), each of the optical wavelength band (λ_1 , λ_2 , λ_3 , fig. 4) causing one of the control modules to select the respective power consuming device for supplying electrical power (each wavelength band is received by respective switch s 30) and the wavelength band transmitted singly through the fiber line (optical signals of wavelengths λ_1 , λ_2 , λ_3 are multiplexed and transmitted singly through the fiber 40). As to claim 30, Endo further teaches an optical coupler (11, fig. 4) that is connected to the fiber line (optical coupler 11 is connected to fiber line 40 shown in fig. 4) and that receives separate optical wavelength bands (optical coupler 11 receives separate wavelengths λ_1 , λ_2 , and λ_3 from respective fiber lines 40) from multiple tunable lasers (optical signals of wavelengths

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λ_1 , λ_2 , and λ_3 that are transmitted through optical switches 20 and over fiber lines 40 can be generated by respective tunable lasers).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pitt et al. (US patent No: 4,928,319) in view of Davis (US patent No: 4,941,201).

Regarding claim 19, Pitt discloses a method of providing electrical power to multiple power consuming devices (col. 1, lines 10-37 and figs, 7, 8), comprising the steps of: interconnecting a power consuming device (256, fig. 1) to a fiber optic line (240, fig. 8), so that the power consuming device is selected for operation thereof by transmitting one of multiple optical wavelength bands (col. 6, lines 30-40, note that there are a plurality of laser 232 that each can generate a respective optical signal that are further transmitted over fiber 240) through the fiber optic line (240, fig. 8), wherein each of the transmitted optical wavelength bands causes a device to be selected (col. 1, lines 52-64, col. 7, lines 32-40). Pitt differs from the claimed invention in that Pitt does not specifically disclose providing electrical power to a multiple of power consuming devices. However, Pitt discloses the method of transmitting power, as discussed above can be used for transmitting power to remote operation of surveillance, communications, control systems, or devices (col. 1, lines 52-64). Pitt further discloses individual detectors have respective electrical outputs which are connected to drive the

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utilization device (col. 7, lines 32-40). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention that an optical signal transmission and electrical power distribution system such as the one of Pitt can transmit power to multiple power consuming devices in order to provide a power supply arrangement that is not susceptible to electro-magnetic interference for powering of electrical devices. Pitt further differs from the claimed invention in that Pitt does not specifically disclose the power consuming devices are data storage devices. Davis teaches a transmission and retrieval system (col. 1, lines 10-15 and fig. 1), wherein data storage devices (22, fig. 1) derive their operating power from the combinational signal transmitted by a data link means (col. 2, lines 35-45, 60-64). Therefore, it would have been obvious to an artisan at the time of invention to incorporate data storage devices such as the ones of Davis for the power consuming or utilization devices in the signal transmission system of Pitt in order to provide utilization devices that can retrieve and store data.

8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pitt et al. (US patent No: 4,928,319) in view of Tymes (US patent No: 5,193,201).

Regarding claim 20, Pitt discloses a method of providing electrical power to multiple power consuming devices (col. 1, lines 10-37 and figs, 7, 8), comprising the steps of: interconnecting a power consuming device (256, fig. 1) to a fiber optic line (240, fig. 8), so that the power consuming device is selected for operation thereof by transmitting one of multiple optical wavelength bands (col. 6, lines 30-40, note that there are a plurality of laser 232 that each can generate a respective optical signal that are further transmitted over fiber 240) through the fiber optic line (240, fig. 8), wherein each of the transmitted optical wavelength bands causes a

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device to be selected (col. 1, lines 52-64, col. 7, lines 32-40). Pitt differs from the claimed invention in that Pitt does not specifically disclose providing electrical power to a multiple of power consuming devices. However, Pitt discloses the method of transmitting power, as discussed above can be used for transmitting power to remote operation of surveillance, communications, control systems, or devices (col. 1, lines 52-64). Pitt further discloses individual detectors have respective electrical outputs which are connected to drive the utilization device (col. 7, lines 32-40). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention that an optical signal transmission and electrical power distribution system such as the one of Pitt can transmit power to multiple power consuming devices in order to provide a power supply arrangement that is not susceptible to electro-magnetic interference for powering of electrical devices. Pitt further differs from the claimed invention in that Pitt does not specifically disclose the power consuming devices have programmed functions. Tymes teaches a light transmission system (col. 1, lines 5-10 and fig. 1), wherein data processing devices use photodiodes to receive both power and data (col. 1, lines 52-53) and the photodiodes generate electrical voltage to provide power to a microprocessor (col. 1, lines 54-55). Therefore, it would have been obvious to an artisan at the time of invention to incorporate a data processing device that has a programmed function, or a microprocessor such as the one of Tymes for the power consuming device, or utilization device in the signal transmission system of Pitt in order to provide utilization devices with processing functions.

9. Claims 39-40, 44-45, 47-49, and 52-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo (US patent No: 4,495,421).

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Regarding claims 39-40, Endo discloses a method of providing electrical power to multiple electronic devices as discussed above in claims 25 and 30. Endo differs from the claimed invention in that Endo does not specifically disclose the electronic devices are data storage devices, or devices with programmed functions. Endo teaches an electrical appliance includes various electric loads such as motors, solenoid, air-conditioning heater, etc (col. 2, lines 31-38). Accordingly, if the electrical appliance is an air-conditioning heater, as it is suggested by Endo, such device can have a data storage device for storing different instruction and commands that can be given to the heater by an operator, or such device can have a processor with programmed functions to provide certain commands and control for operation of such device. Therefore, it would have been obvious to a person of ordinary skill in the art that electrical appliances such as the one disclosed by Endo can have electronic circuitries to store data, or they can be provided with installed programs to perform specific functions.

Regarding claim 44, Endo discloses a control system for selectively supplying electrical power to multiple electrical power consuming devices (2-1, 2-2, 2-3, fig. 4); a fiber optic line (40, fig. 4); multiple control modules (30-1, 30-2, 30-3, fig. 4) that are responsive to respective optical wavelength bands (λ_1 , λ_2 , λ_3), multiple opto-electric converters (col. 3, lines 38-40 and 30, 31, fig. 2), as discussed above in claims 25, 30, and 39-40. Endo differs from the claimed invention in that Endo does not disclose the system is used in a well tool for selectively supplying electrical power to multiple electrical power consuming well tools in a subterranean well. However, such limitations are recitation of an intended use of the claimed invention. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as

compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Regarding claim 45, Endo discloses a WDM drop (11, fig. 4) interconnected to the fiber line (40, fig. 4

Regarding claim 47, Endo discloses an optical coupler (11, fig. 4) connected to the fiber line (40, fig. 4) and an optical filter (12, fig. 4) interconnected between the coupler (11, fig. 4) and the power consuming device (2, fig. 4).

Regarding claims 48-49, Endo discloses the multiple optical wavelength bands (λ_1 , λ_2 , λ_3) are transmitted singly or simultaneously through the fiber (optical signals of wavelengths λ_1 , λ_2 , λ_3 are transmitted singly and simultaneously over the fiber 40).

Regarding claim 52, Endo discloses an optical coupler (11, fig. 4) for receiving separate optical wavelength bands (optical coupler 11 receives separate optical signals of wavelengths λ_1 , λ_2 , λ_3).

Regarding claim 53, Endo discloses a tunable laser (optical signals of wavelengths λ_1 , λ_2 , and λ_3 that are transmitted through optical switches 20 and over fiber lines 40 can be generated by respective tunable lasers).

Regarding claims 54-55, Endo discloses opto-electric converters (31, fig. 2) that are connected to a switch (30, figs. 2, 4), wherein the switch is a field effect transistor (col. 3, lines 38-41).

Regarding claims 56, as it is understood in view of above 112 problem, Endo discloses electrical power is supplied to the power consuming devices in an analog form (col. 3, lines 38-45, col. 5, lines 29-31).

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Regarding claims 57-58, Endo discloses data storage devices, as discussed above in claims 39-40.

10. Claims 46, 50-51, and 59-61 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claims 11-13 and 27-28 are allowed over prior art of record.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (703) 308-9063.

The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



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